

DETAILED ACTION

Receipt is acknowledged of amendment filed on March 15, 2010 and supplemental response filed on May 21, 2010. Claims 1, 3, 19, 24-29, 31-33, and 48-51 are now pending. Claims 50 and 51 are new. Accordingly, claim rejection made under 35 U.S.C. § 103 (a) as indicated in the previous Office action dated December 14, 2009 is modified to address these new claims. No change to the previous grounds of rejection has been made.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 19, 24-29, 31-33, 48, and 49 are rejected as unpatentable under 35 U.S.C. § 103 (a) over Kumar et al. (US 5468477).

Kumar teaches a face cream composition comprising 2 % by weight of the vinyl-silicone graft polymer of instant claims 1 and 3. See Example 27; instant claims 31-33, 48 and 49. In the mercapto functional silicone compound shown in col. 4, line 50 – col. 5, line 16, G5, and G6 can be ZSA, wherein A represents a vinyl polymeric segment consisting essentially of polymerized free radically polymerizable monomer, and Z is a divalent linking group, preferably methylene or propylene for reasons of commercial availability. Alternatively, R2 and R4 of the Kumar polymer being C3 alkylene and G2 comprising A (vinyl polymer) also meets the thiopropylene linker limitation. The graft copolymer used in the facial cream composition of Example 27 is 3-mercaptopopylmethylsiloxane (PS850 from Huls America, Inc.) having ethylhexyl

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methacrylate and n-butyl methacrylate monomers (both alkyl (meth)acrylates). See Example 3. The copolymers which meet the present claim limitations “poly(metha)acrylic acid)” and “poly (alkyl (meth)acrylate)” of instant claims 1 and 3 are shown in Example 1 and 2, which employ acrylic acid and t-butyl acrylate monomers. The reference further teaches the softness or hardness of the monomers is well known, and suggests that selection of the suitable soft and/or hard monomers to manipulate the film strength would have been well within the skill in the art. See col. 18, lines 19-64. The ethylhexyl acrylate monomer of Example 3, which is used in Example 27, is known as a soft monomer. See *Id.* The reference particularly teaches that the hard monomers provides “tensile strength and also reduces tack in the copolymer”, and include acrylic acid and methacrylic acid ester of an alkyl monoalcohol containing 1-6 carbon atoms. See col. 15, lines 50 – col. 16, line 8.

Kumar teaches that decorative cosmetics are “used to hide small blemishes or symptoms of aging”. See col. 1, lines 57 – 61. The reference states, “[t]heir sole purpose is an alteration of the appearance, for example, . . . preparation for masking skin imperfection and shininess. . . etc”. See col. 1, line 67 - col. 2, line 3. The reference also teaches that the prior art cosmetic compositions may comprise active ingredients such as “skin-improvers”. See col. 25, lines 10-29. The vinyl-silicone copolymers of Kumar are used to make a gel composition, and said to also have “excellent film-forming capability”, exhibiting a superior water-resistance, oil-resistance, and other characteristics required for cosmetic films”. See col. 17, line 30 – col. 18, line 24. The reference also teaches using preferably 0.2-30 % by weight of vinyl-silicone

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copolymer to realize the desired cosmetic film property. See Examples 43—50. See also col. 17, lines 56-66; col. 19, lines 4-13. See instant claims 19, 25, 26, and 31-33. Kumar further suggests that the grafted vinyl-silicone copolymer gives a good adhesion to a substrate and retains its shape-retention property in virtue of the hard monomers which renders the grafted copolymers tensile strength. See col. 15, line 47- col. 16, line 14.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Kumar by formulating a skin cosmetic composition incorporating the mercaptopolydimethylsiloxanes having acrylic acid and n-butyl methacrylate monomers of Examples 1. The skilled artisan would have been motivated to do so because the reference teaches specific examples of a skin care product in Example 27 and provides detailed benefits of the prior art film-forming vinyl-silicone graft copolymers, which include “excellent film-forming capability”, superior resistance to water and oil, “thick-film sensation” and otherwise suitable for cosmetic films. The motivation to use polymethacrylic acid and poly alkyl methacrylate monomers, such as in Examples 1 and 2, would have been obviously found in the teaching that acrylic acid and t-butyl (meth)acrylate both form hard films which renders the grafted copolymers tensile strength and eliminates tackiness of the film. Thus, by substituting the copolymer used in Example 27 with the polymers of Examples 1 or 2, the skilled artisan would have had a reasonable expectation of successfully producing a cosmetic skin composition which produces films with improved tensile strength and reduced tackiness.

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The skilled artisan would have been motivated to use this composition to hide symptoms of aging and skin perfection, such as wrinkles, because Kumar teaches that the “sole purpose” of decorative cosmetics is to alter the appearance of skin, such as hiding symptoms of aging and masking skin imperfection. While these statements in the reference (col. 1, bridging par.) refer to the purpose of using any decorative skin cosmetic in general, the reference nonetheless would have motivated a skilled artisan to use the Kumar cosmetic compositions for the very purpose of hiding symptoms of aging and skin imperfection just as applicant has done in this case, with a reasonable expectation of success.

Furthermore, one of ordinary skill in the art using the Kumar cosmetic composition comprising the grafted silicone polymer of the instant claims would have obviously observed and noticed that the presently claimed methods of reducing the signs of cutaneous aging and wrinkles are naturally carried out when the prior art composition is applied onto skin. The prior art suggests the same method step of topically applying the same vinyl-silicone grafted copolymer of instant claims, thus the appearance of the presently claimed skin wrinkle reduction would have obviously occurred when the prior art composition was in use.

With respect to the new claims, claims 50 and 51, although the face cream (Example 27) contains an aqueous phase, Kumar does not specifically indicate whether the grafted silicone copolymer is in the aqueous phase.

However, explicitly indicates that water is a suitable solvent for the copolymer. See col. 24, lines 29 – 39. Kumar teaches in Examples 49-51 water-soluble silicone

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grafted copolymer comprising mercapto functional silicone and methylacrylate, methyl methacrylate and methacrylic acid monomers. These are referred to as “waterborne analogues of Examples 46-48”, thus both water-soluble and insoluble form of the copolymers are taught and suggested for cosmetic use. Example 31 discloses an after-shave conditioning lotion comprising an aqueous phase and 2 wt % of grafted silicone polymer prepared to according to Formulation 2 and Example 2 of the reference. Example 2 discloses a silicone copolymer prepared by grafting mercapto functional silicone with acrylic acid and t-butyl acrylate monomers. Formulation 2 teaches the 6.4 g of the copolymer is dissolved in 53 ml of ethanol, providing the polymer in water soluble form.

The prior art teaches the same vinyl-silicone grafted copolymer, and the method of solubilizing the polymer suitable for an aqueous phase is also taught by the same reference. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the teachings of Kumar by incorporating the water-soluble grafted silicone copolymer of the prior art to an aqueous phase and topically apply the composition obtain the film sensation as motivated by the teachings of the references. The skilled artisan would have been motivated to do so as the reference teaches water is a suitable solvent for the copolymer and further illustrates a shaving lotion comprising an aqueous phase and water-soluble grafted silicone copolymer. Although example 27 does not specifically indicate whether the grafted silicone copolymer is in the aqueous phase, a person of ordinary skill in the art would have reasonably expected that such formulation would have resulted in similar tensor

strength and film sensation as a composition containing the same copolymer in an oil phase.

Response to Arguments

Applicant's arguments filed on March 15, 2010 and May 21, 2010 have been fully considered but they are not persuasive.

Citing col. 21 of Kumar, applicant asserts the polymers of the present invention are different from the prior art dissolved in oil and have different solubility properties. In response, examiner respectfully points out that the reference teaches solubilizing the same copolymer in ethanol to make it water soluble. Applicant's argument that the prior art is only limited to oil-soluble vinyl-silicone copolymer is unpersuasive.

Applicant further argues that Kumar does not teach or suggest the copolymers would have been reasonably expected to reduce the signs of cutaneous aging and/or reduce wrinkles when applied to the skin. In response, it is well settled in patent law that "[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." See Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. See In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). In this case, applicant's argument is unpersuasive because the prior art teaches the same grafted copolymer of instant claims which are

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applied on skin; applicant's finding of the anti-aging or wrinkle reducing effect of the prior art copolymer does not amount to a new use.

Applicant asserts the Office has provided the film forming properties of the prior art polymer as used in hair care as the support for the obviousness rejection. The statement is inaccurate, as the rejection has cited the portions of the Kumar reference that teaches the beneficial cosmetic properties of the prior art vinyl-silicone copolymers as used for skin products, which provide "excellent film-forming capability", exhibiting a superior water-resistance, oil-resistance, and other characteristics required for cosmetic films". See Kumar, col. 17, line 30 – col. 18, line 24.

Applicant continues to assert that the previously submitted declaration (dated September 26, 2006 and May 14, 2008) shows a surprising tensioning effect of the polymers of the present invention. Examiner maintains the position that the tensile effects are mere characteristics that have been presented in the treated skin according to the teachings and suggestions of Kumar.

Citing In re Sullivan, applicant asserts that it is legal error for the Office to dismiss a showing of unexpected results as flowing from or inherent in the Examiner's prior art construct. See 84 U.S.P.Q. 2d 1034 (Fed. Cir. 2007). However, applicant provides no reason or explanation as to how the court case is applicable to the facts of the present case. While applicant asserts to have shown "an unexpected improvement", no such improvement from the prior art is seen in the present case: the present invention is directed to using the same film forming copolymer as taught and suggested by the prior art. Kumar teaches of the tensile film properties of the copolymer, and how to

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manipulate hard and soft monomers to make the copolymers of the desired tensile strength.

In the remarks filed in supplemental response filed on May 21, 2010, applicant asserts the reference to hard and soft monomers of the copolymers in Kumar, col. 14-16 may be used for hair compositions. Applicant further asserts the reference limits the prior art skin care products to contain the vinyl-silicone copolymers in oil and in the form of gel. However, Kumar does not limit the skin care products to be in any specific formulation. The reference teaches in col. 20, lines 28 – 38 that the cosmetic compositions may be in oil-in-water or water-in-oil emulsions. Furthermore, as indicated in the rejection above, Kumar teaches water soluble form of the copolymers, the disclosed shaving lotion is formulated without any oil. As indicated in the rejection, although the reference does not specifically illustrate a cosmetic composition comprising the copolymer contained in an aqueous phase, it would only take an ordinary skill of the art to make such composition, with a reasonable expectation of a similar tensile strength of the formed film.

For above reasons, the obviousness rejection as indicated above is viewed proper.

Conclusion

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GINA C. YU whose telephone number is (571)272-8605. The examiner can normally be reached on Monday through Thursday, from 8:00AM until 6:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/GINA C. YU/
Primary Examiner, Art Unit 1611